



156 East First Street
New Richmond, WI 54017
Ph 715-246-4268 Fax 715-246-7129
www.newrichmondwi.gov

September 15, 2015

TO ALL MEMBERS OF THE BOARD OF APPEALS

Glenn Highum
Mike Kastens
Bernard Peterson

Bob Pierson
Sarah Mellerud

This is to notify you that there will be a meeting of the Board of Appeals of the Building and Zoning Codes of the City of New Richmond Tuesday, September 22, 2015 at 4:00 p.m. in the Civic Center, 156 East First Street.

BOARD MEMBERS ONLY: Please notify me, as soon as possible, if you are unable to attend, so I can arrange for an alternate. Thank you.

AGENDA:

1. Roll Call
2. Adoption of Agenda
3. Approval of the minutes from the Previous Meeting, August 11, 2015
4. Public Hearing to discuss the following:
 - a) A Petition from St. Croix County to allow a monopole antenna support structure to be installed at an overall elevation of 130' AGL exceeding the allowed height of 71 MSL by 59'. Property is located at 1445 North Fourth Street, New Richmond.
 - b) A Petition from St. Croix County to allow construction of public safety radio system antennas upon the City water tower at 1245 St. Croix Avenue at a height 23 feet above the height of the water tower exceeding the allowed height of 15 feet above the height of the water tower.
5. Action on Public Hearing
6. Communications and Miscellaneous
7. Adjournment

Tanya Reigel,
City Clerk

If you need a sign language interpreter or other special accommodations, please contact the City Clerk at 246-4268 or Telecommunications Device for the Deaf (TDD) at 243-0453 at least 48 hours prior to the meeting so arrangements can be made.

Copies:

The News
City Website

Northwest Community Communications



3601 Thurston Avenue N, Suite 100
Anoka, MN 55303
Phone: 763.231.5840
Facsimile: 763.427.0520
TPC@PlanningCo.com

MEMORANDUM

TO: Board of Appeals

FROM: Daniel Licht, AICP

DATE: 15 September 2015

RE: New Richmond; St. Croix County; Telecommunication tower variance

TPC FILE: 164.02

BACKGROUND

St. Croix County currently utilizes a decommissioned water tower at the Health Services Complex located at 1445 North 4th Street for mounting communication antennas and microwave dishes for its public safety radio system. The condition of the water tower structure has degraded over time and is no longer suitable for this purpose and St. Croix County is proposing to erect a 130 foot tall monopole tower upon the subject site for the location of antennas for the public safety radio system. A variance required to allow for the proposed height of the tower above the 70 feet allowed at the subject site by the Zoning Ordinance. A public hearing has been noticed for the Board of Appeals meeting on 22 September 2015 at 4:00PM.

Exhibits:

- A. Site Location
- B. Narrative Attachment for Variance

ANALYSIS

Comprehensive Plan. The HWY 64/65 Comprehensive Land Use Plan guides the subject site for commercial land uses. Installation of the proposed tower upon the subject site for the purposes of locating antennas for the public safety radio system is consistent with the policies

of the Comprehensive Plan to provide for public health safety and welfare as a fundamental government function.

Zoning. The subject site is zoned Z3 District and is also within the Airport Overlay District. Construction of the proposed tower upon the property requires a conditional use permit in accordance with Sections 121-47.D.1 and 121-61.D of the Zoning Ordinance, which have been approved by the Plan Commission on 8 September 2015, with the stipulation that the height of the proposed tower is subject to the review and approval of the Board of Appeals. The approval of the conditional use permit is based upon a finding of there being no other existing structures within the necessary coverage area suitable for location of the antennas, which are necessary to provide for public health safety and welfare.

Surrounding Land Uses. The subject site is surrounded by the following existing and planned uses outlined in the table below. Based on the area of the subject site and distance from any adjacent land uses, the proposed tower will be compatible with the surrounding land uses.

Direction	Land Use Plan	Zoning Map	Existing Use
North	ETZ	ETZ	Agriculture
East	Commercial Mixed Use	Z3 District	Agriculture
South	Medium Density Residential	Z3 District	Commercial Single Family
West	Commercial	Z3 District	Agriculture

Coverage Analysis. Exhibits B, C, D and E of the applicant's narrative outline coverage and line of sight analysis for a tower installed to the allowed 70 foot height limit for antennas within the Z3 District and the proposed 130 foot height of the tower. The applicant is requesting approval of a variance to allow the proposed tower height of 130 feet, which would be within one foot of the height of the existing decommissioned water tower upon which the antennas are currently mounted. The request for variance is subject to review and approval of the Board of Appeals based upon the criteria established by Section 121-33.D.1. of the Zoning Ordinance:

- a. *Denial of the variance may result in unnecessary hardship to the property owner due to physiographical consideration. There must be exceptional, extraordinary or unusual circumstances or conditions applying to the lot or parcel, structure, use or intended use that do not apply generally to other properties or uses in the same district and the granting of a variance would not be so general or recurrent nature as to suggest that this Ordinance should be changed.*
- b. *The conditions upon which a petition for variance is based are unique to the property for which the variance is being sought and that such variance is necessary for the preservation and enjoyment of substantial*

property rights possessed by other properties in the same district and same vicinity.

- c. The purpose of the variance is not based exclusively upon a desire to increase the value or income potential of the property.*
- d. The granting of the variance will not be detrimental to the public welfare or injurious to the other property or improvements in the neighborhood in which the property is located.*
- e. The proposed variance will not undermine the spirit and general and specific purposes of this Ordinance.*

The coverage area for the 130 tower provides a stronger signal for most of New Richmond to improve service and extended coverage west towards Somerset based on the topography surrounding the subject site. The 130 foot tower height is also needed to ensure connections between microwave antenna locations and minimize the need for additional antennas and tower locations. In that the radio system is needed to provide for public health safety and welfare, the coverage analysis adequately demonstrates the need for the proposed 130 foot tower and justifies a variance for the additional height above 70 feet allowed within the Z3 District under the criteria established by Section 121-33.D.1. of the Zoning Ordinance.

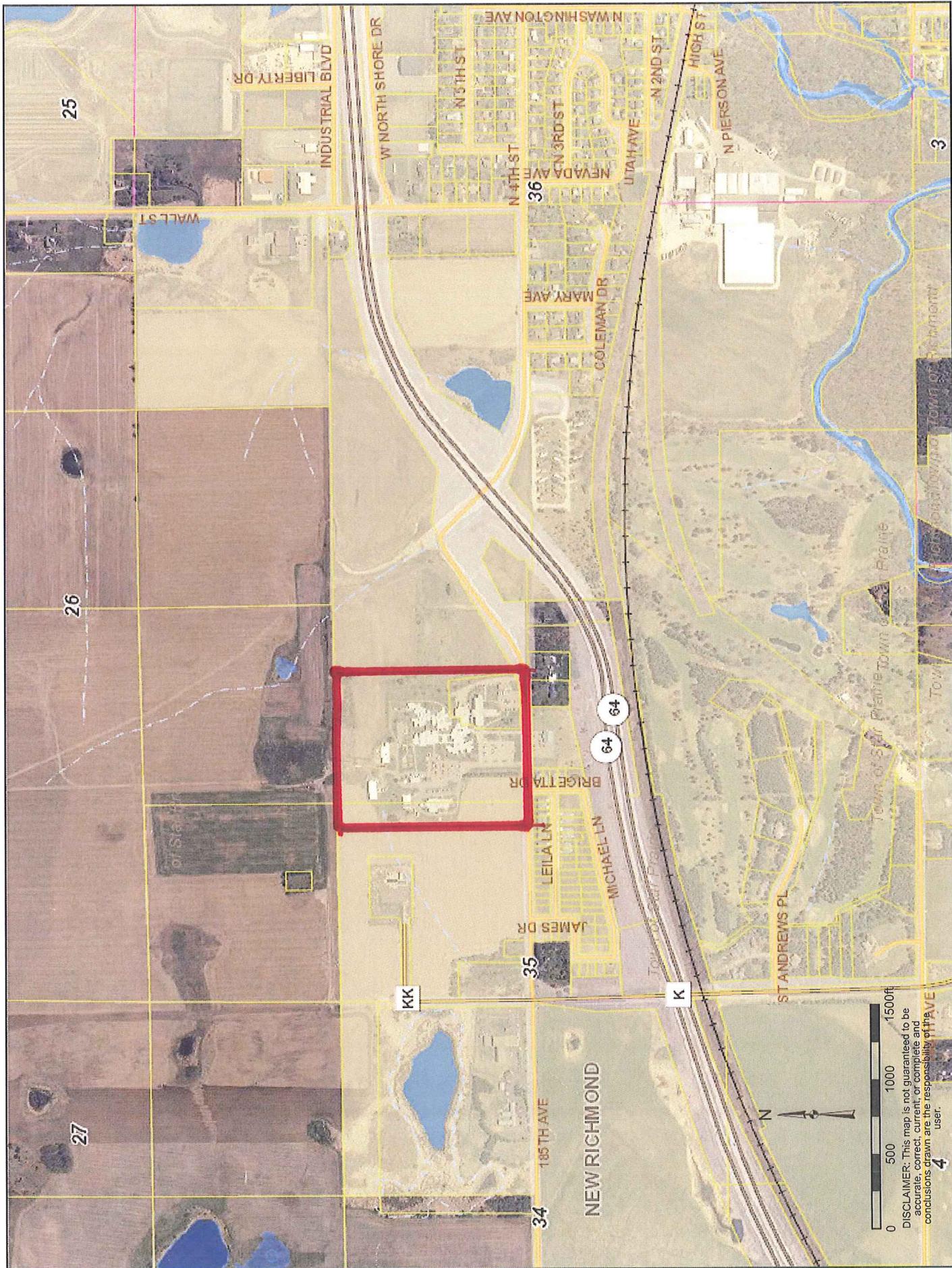
RECOMMENDATION

The proposed construction of a 130 foot monopole tower upon the St. Croix County Health Services site is consistent with the criteria for a conditional use permit and variance and complies with the requirements of the Zoning Ordinance. The Development Review Committee considered the variance application at their meeting on 27 August 2015 and recommends approval subject to the finding outlined below.

POSSIBLE ACTIONS

- A. Motion to **approve** a variance for construction of a 130 foot tall telecommunications tower upon the St. Croix County Health Services property based on the following finding:
 - 1. The analysis provided by the applicant demonstrates that the proposed 130 foot height of the tower is the minimum necessary based on the existing elevation and surrounding topography at the proposed site to provide adequate public safety radio system coverage for the City and surrounding areas to protect health safety and welfare.

- B. Motion to **deny** the application based on a finding that the request is inconsistent with the policies of the Comprehensive Plan and requirements of the Zoning Ordinance.
- C. Motion to **table** for further discussion.
- c. Mike Darrow, City Administrator
Beth Thompson, Community Development Director
Tanya Reigel, City Clerk
Sarah Skinner, Building Inspector
Jeremiah Wendt, Public Works Director



0 500 1000 1500ft

DISCLAIMER: This map is not guaranteed to be accurate, correct, or complete and the user assumes all responsibility for any conclusions drawn from a user.



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Anoka, MN 55303
Phone: 763.231.5840
Facsimile: 763.427.0520
TPC@PlanningCo.com

MEMORANDUM

TO: Board of Appeals

FROM: Daniel Licht, AICP

DATE: 15 September 2015

RE: New Richmond; St. Croix County; South City water tower variance

TPC FILE: 164.02

BACKGROUND

St. Croix County is proposing to mount communication antennas and microwave dishes for its public safety radio system on the City water tower located at St. Croix Avenue and Paperjack Drive. The installation of the antennas upon the existing, City owned water tower is subject to review by the Development Review Committee and issuance of a building permit pursuant to Section 121-47.D.2 of the Zoning Ordinance. A variance is also required to allow for the proposed height of the antennas above the water tower. A public hearing has been noticed for the Board of Appeals meeting on 22 September 2015 at 4:00PM.

Exhibits:

- A. Site Location
- B. Plan set dated 06/16/15

ANALYSIS

Comprehensive Plan. The Comprehensive Land Use Plan guides the subject site for industrial land uses. The City owned watertower is part of the municipal utility system and allowed as an essential service facility. Installation of the proposed antennas upon the City water tower for

the public safety radio system is consistent with the policies of the Comprehensive Plan to provide for public health safety and welfare as a fundamental government function.

Zoning. The subject site is zoned Z7 District. Location of the antennas is a permitted use upon the City owned, existing structure subject to the performance standards outlined in Section 121-47.F of the Zoning Ordinance.

Surrounding Land Uses. The Zoning Ordinance encourages location of antennas upon existing structures, such as the City water tower, so as to minimize the number of towers within the City and minimize conflicts with surrounding land uses. The location of the antennas on the existing City owned water tower will be compatible with the surrounding land uses shown in the table below.

Direction	Land Use Plan	Zoning Map	Existing Use
North	Industrial	Z3 District	Industrial
East	Commercial	Z3 District	Commercial
South	Commercial	Z3 District	Undeveloped
West	Industrial	Z7 District	Industrial

Height. Table 12 of the Zoning Ordinance limits the height of antennas mounted on City water towers to not more than 15 feet above the height of the structure. The proposed antennas include a WHIP for VHF antennas that extends 23 feet above the height of the tower. The mounting of the VHF antennas is required at this height to ensure connections to other antennas on the system according to the applicant, making a variance application required. The request for variance is subject to review and approval of the Board of Appeals based upon the criteria established by Section 121-33.D.1. of the Zoning Ordinance:

- a. *Denial of the variance may result in unnecessary hardship to the property owner due to physiographical consideration. There must be exceptional, extraordinary or unusual circumstances or conditions applying to the lot or parcel, structure, use or intended use that do not apply generally to other properties or uses in the same district and the granting of a variance would not be so general or recurrent nature as to suggest that this Ordinance should be changed.*
- b. *The conditions upon which a petition for variance is based are unique to the property for which the variance is being sought and that such variance is necessary for the preservation and enjoyment of substantial property rights possessed by other properties in the same district and same vicinity.*
- c. *The purpose of the variance is not based exclusively upon a desire to increase the value or income potential of the property.*

- d. *The grating of the variance will not be detrimental to the public welfare or injurious to the other property or improvements in the neighborhood in which the property is located.*
- e. *The proposed variance will not undermine the spirit and general and specific purposes of this Ordinance.*

The height of the antennas upon the City water tower provides for the required signal to serve New Richmond and connect to other antennas that are part of the public safety system. The proposed height of the antennas also minimizes the need for additional antennas and tower locations. In that the radio system is needed to provide for public health safety and welfare, the applicant's need justifies a variance for the additional height above the City water tower structure than allowed by the Zoning Ordinance.

RECOMMENDATION

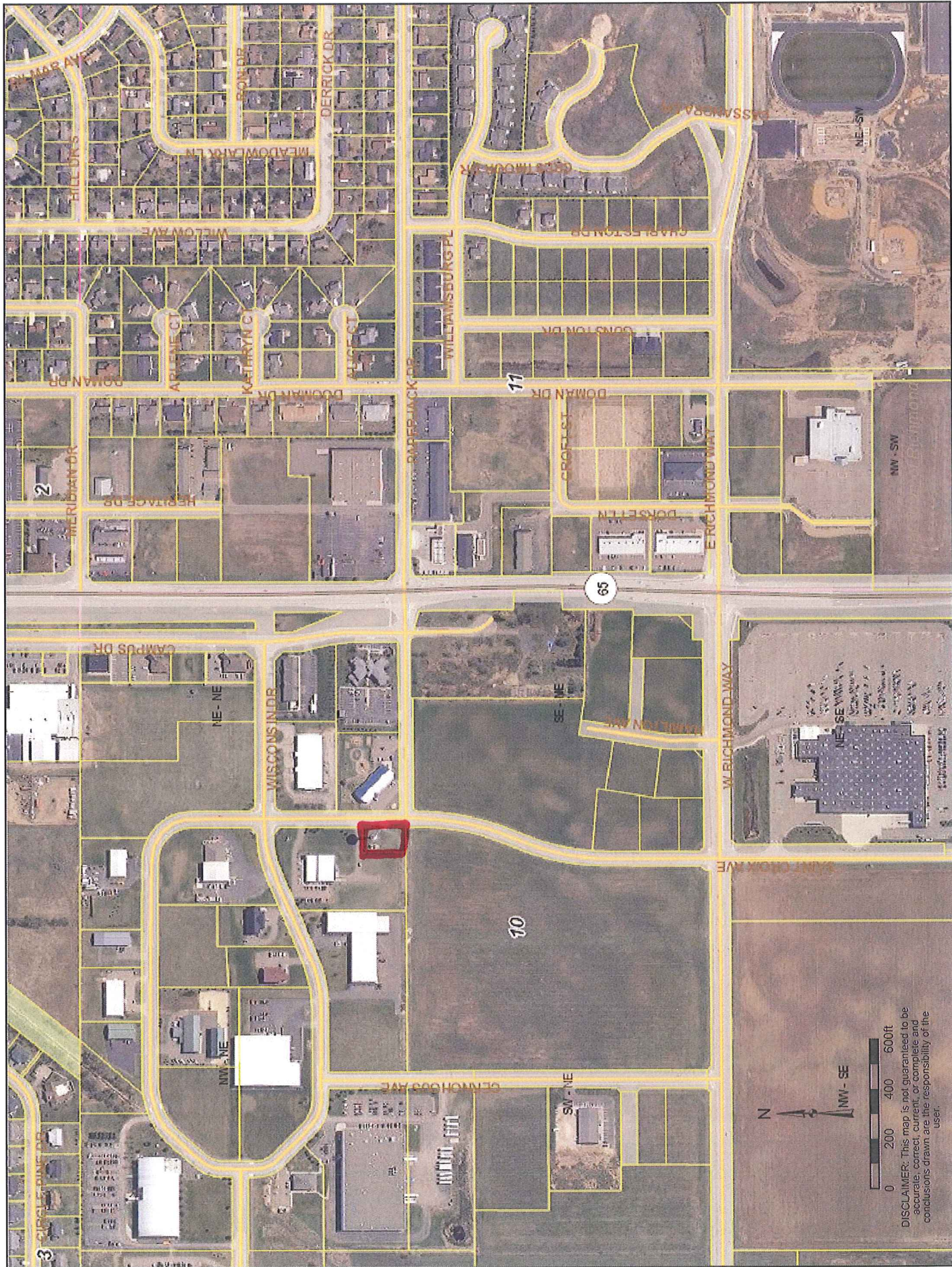
The Development Review Committee considered the application to locate St. Croix County public safety antenna equipment on the City's south water tower at their meeting on 27 August 2015 and approved the request subject to approval of a variance by the Board of Appeals for the height of the antennas above the structure. The requested variance meets the criteria for established by the Zoning Ordinance and City staff recommends approval subject to the findings outlined below.

POSSIBLE ACTIONS

- A. Motion to **approve** a variance for mounting telecommunications antennas upon the City south water tower property based on the following findings:
 - 1. The height of the antennas upon the City water tower provides for the required signal to serve New Richmond and connect to other antennas that are part of the public safety system.
 - 2. The proposed height of the antennas also minimizes the need for additional antennas and tower locations.
 - 3. The applicant's need to provide for public health safety and welfare justifies a variance for the additional height above the City water tower structure than allowed by the Zoning Ordinance.
- B. Motion to **deny** the application based on a finding that the request is inconsistent with the policies of the Comprehensive Plan and requirements of the Zoning Ordinance.

C. Motion to **table** for further discussion.

c. Mike Darrow, City Administrator
Beth Thompson, Community Development Director
Tanya Reigel, City Clerk
Sarah Skinner, Building Inspector
Jeremiah Wendt, Public Works Director



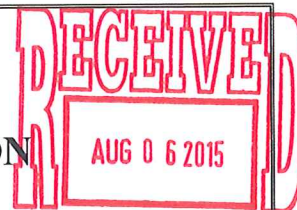
0 200 400 600ft

DISCLAIMER: This map is not guaranteed to be accurate, correct, or complete and the conductors draw are the responsibility of the user.



VARIANCE APPLICATION

City Ordinance Section 121-33
www.newrichmondwi.gov



By: _____

City of New Richmond
156 East First Street ❖ New Richmond, WI 54017
Phone: (715) 246-4268 ❖ Fax: (715) 246-7129

APPLICATION FEE: \$250 1st Request \$300.00 2nd Request
ESCROW: \$500

Application fee should be made payable to City of New Richmond upon submittal of completed application. Escrow funds will be drawn to cover project-related costs. Additional funds may be required; surplus funds will be returned.

Please complete the application by typing or printing in ink. Use additional paper if necessary.

1. Property Owner Information:

Last name: Thompson - St. Croix County First name: Patrick
Address: 1101 Carmichael Road City/State/Zip: Hudson, WI 54016
Phone number: 715-381-4303 Email address: patrick.thompson@co.saint-croix.wi.us

2. Applicant Information: (if different from above)

Last name: Anderson - St. Croix County First name: Terry
Address: 1101 Carmichael Road City/State/Zip: Hudson, WI 54016
Phone number: 715-381-4910 Email address: terry.andersen@co.saint-croix.wi.us

3. Address(es) of Property Involved: (if different from above)

1445 North 4th Street, New Richmond

4. Legal Description See Attached

5. Variance Requested Allow a monopole antenna support structure to be constructed at an overall elevation of 130' AGL, exceeding the allowed height of 71' MSL by 59'.

6. Lot Size 968,913+/- Square Feet Width 880' +/- Length 1243' +/- Setback: Front 890' +/- Rear 352' +/- Left 152' +/- Right 725' +/-

Variance applications must be received by the first Thursday of each month; applications received after this date cannot be heard at the Board of Appeals meeting the following month.

7. **Proposed Use** Emergency Communications Monopole Tower
8. **Reason (hardship, unique situation, etc.)** St. Croix County is undertaking a major replacement of its public safety radio system. The antennas in New Richmond are currently mounted to an aging, de-commissioned water tank. A new monopole tower is needed for the radio system upgrade
9. **Additional Required Information:**
- a. **Written Narrative:** The narrative should describe in detail the nature of the intended use, why you believe the variance should be granted.
- b. **Consultant Fees:** Whenever third party consultants are utilized in the preparation of application materials (e.g., a traffic study) or the City's review of an application (e.g., traffic study analysis) the applicant shall be responsible for paying the entirety of those costs.
10. **Other Information:** In addition to the written narrative, a scale map of the lot and how existing buildings are laid out on that lot, as well as, where the addition or new building would be placed if the variance is granted.
11. **Signature(s):** By signing below, you attest that the information above and attached is true and correct to the best of your knowledge.

Property Owner:  Date: 8-5-15

Applicant:  Date: 8-5-15

Fee Paid: \$250 Date: 8-13-15 Receipt # 61594

Escrow Paid: \$500 Date: 8-13-15 Receipt # 61594

Narrative Attachment to Variance Application (121-47)

Property Address: 1445 North 4th Street, New Richmond

Property ID: 261-1019-07-351 (Exhibit A)

St. Croix County operates a network of public safety radio sites throughout the County to provide emergency communications to residents and visitors. Reliable communications is critical to the safety and security of the residents, as well as the public safety responders. As the population and activity within the County has grown, some incremental site additions to the system have been made, however demands and expectations for a contemporary public safety radio system have outpaced those enhancements. The County has funded a multi-million dollar improvement project to construct a simulcast countywide radio system. The system has been designed with particular emphasis on population centers and transportation corridors. In New Richmond, two sites have been identified to accomplish the goals of the new system. One of those sites is the existing communications site at the County's Nursing Home on North 4th Street.

The antennas are currently mounted to the water tank that exists on the site. The water tank is no longer used as a water supply and will not be refurbished or maintained in the future. It has been determined that it is not structurally viable for the new system and associated antennas. The radio equipment is housed in an old building on the site that is scheduled for demolition as part of the campus improvements currently underway. When designing a new system, the goal is to mount antennas to existing structures, rather than constructing a new tower. Unfortunately there are no suitable structures in the area where this site is needed,

In addition to the structural issues at the Nursing Home site, Site plans have been developed for the construction of a 130' tall monopole radio tower to be used to support the new antennas, making the new antennas nearly the same height as the existing antennas. Ground elevation at the center of the proposed monopole is 1,040.4' AMSL¹, the tower foundation would extend approximately 6" above grade, which would result in an overall height of the structure being 1171'. The antennas would be mounted in such a way that they did not extend above the height of the tower.

Based on April 30, 2015 survey activity, the measured height of the existing water tank (top safety railing) is 112.3' AGL². Top mounted antennas on the existing water tank increase the overall height of the existing structure with appurtenances to 128.6' AGL. The ground elevation at the water tank is 1,043.4 AMSL, resulting in an overall height of 1172'.

The coverage from the existing antennas is minimally acceptable. The public safety users report coverage issues in several places within the City. It is important that the new antennas not be mounted lower than those existing. The attached coverage maps show the performance of a portable radio talking to the system and the impact of a 70' antenna height (currently allowed by Ordinance 121-47), Exhibit B, compared with the 130' antenna height, Exhibit C. The technology used for contemporary radio networks also requires that the towers be connected with reliable, data connections. This is typically accomplished using microwave radio links. One of the links will require a minimum dish height of 120', due to obstructions along the path. Exhibits D and E, show the path profiles.

¹ AMSL is height Above Mean Sea Level

² AGL is height Above Ground Level

Ordinance 121-47 allows a maximum structure height of 56 feet with an antenna extending 15 feet above the structure for a maximum height of 71'. The County is requesting a variance from Ordinance 121-47 allowing the construction of a 130' monopole tower.

The County has had conversations with the Airport Manager, and he does not object to a replacement structure that does not exceed the existing antenna height.

Exhibit A

2015 Property Record | St Croix County, WI

Assessed values not finalized until after Board of Review.
Property information is valid as of JUL 13 2015 10:23PM .

OWNER

ST CROIX COUNTY
1101 CARMICHAEL RD
HUDSON, WI 54016

CO-OWNER(S)

FORMER OWNERS

PROPERTY INFORMATION

Parcel ID: 261-1019-07-351
Alternate ID:
School Districts:
SCH DIST NEW RICHMOND
Other Districts:
UPPER WILLOW REHAB DIST
WITC
TID #8 NEW RICHMOND

PROPERTY DESCRIPTION

SEC 35 T31N R18W SE NW EXC PT TO CSM 7/2100 FORMERLY
577D T STAR PRAIRIE ANNEXED CITY NR #480541 EXP PT TO HWY
AS IN 2521/543 (HWY PROJ 1559-08-24) PARCEL 22 FARM, EXC PT
AS DESC IN 976142

Property Address:

Municipality:

CITY OF NEW RICHMOND

DEED INFORMATION

Section Town Range Qtr Qtr Section Qtr Section

Lot:

Block:

Plat Name:

NOT AVAILABLE

Plat History:

(2015) NOT AVAILABLE

Volume

Page

Document #

[976142](#)

[973693](#)

[870602](#)

[755907](#)

[70680](#)

[2521](#)

[543](#)

[67](#)

[287](#)

TAX INFORMATION

Net Tax Before: .00

Lottery Credit: .00

First Dollar Credit: .00

Net Tax After: .00

LAND VALUATION

Valuation Date:

Code Acres Land Value Improvements Total

Total Acres: 0.000

Assessment Ratio:

Mill Rate: 0.000000000

Fair Market Value:

Amt. Due Amt. Paid Balance

Tax	.00	.00	.00
Special Assmnt	.00	.00	.00
Special Chrg	.00	.00	.00
Delinquent Chrg	.00	.00	.00
Private Forest	.00	.00	.00
Woodland Tax	.00	.00	.00
Managed Forest	.00	.00	.00
Prop. Tax Interest		.00	.00
Spec. Tax Interest		.00	.00
Prop. Tax Penalty		.00	.00
Spec. Tax Penalty		.00	.00
Other Charges	.00	.00	.00
TOTAL	.00	.00	.00
Over-Payment		.00	

INSTALLMENTS

Period

End Date

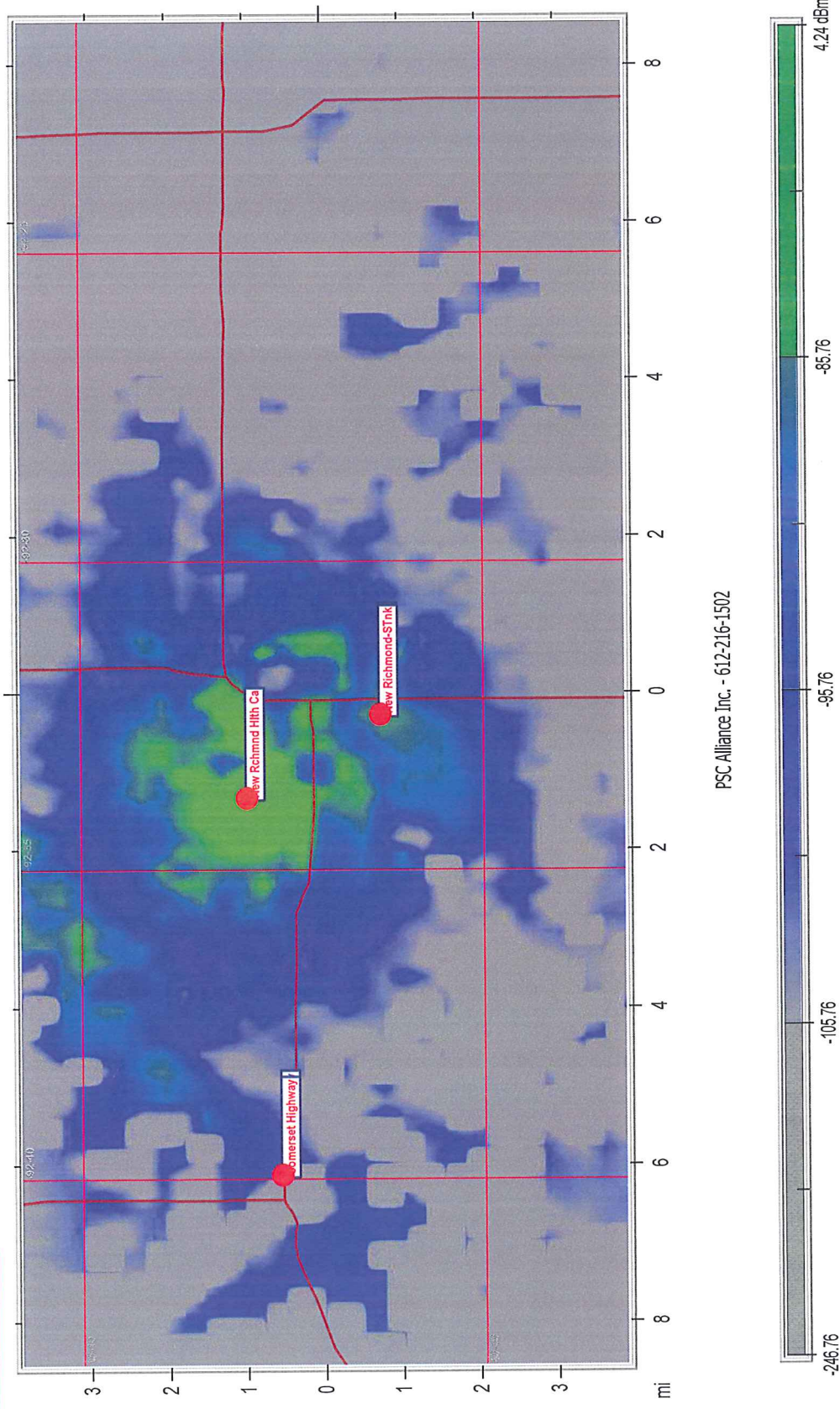
Amount

PAYMENT HISTORY (POSTED PAYMENTS)

<u>Date</u>	<u>Receipt #</u>	<u>Source</u>	<u>Type</u>	<u>Amount</u>	<u>General</u> <u>Tax Status</u>	<u>Special</u> <u>Assess. Status</u>	<u>Interest</u>	<u>Penalty</u>	<u>Total</u>
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Exhibit B

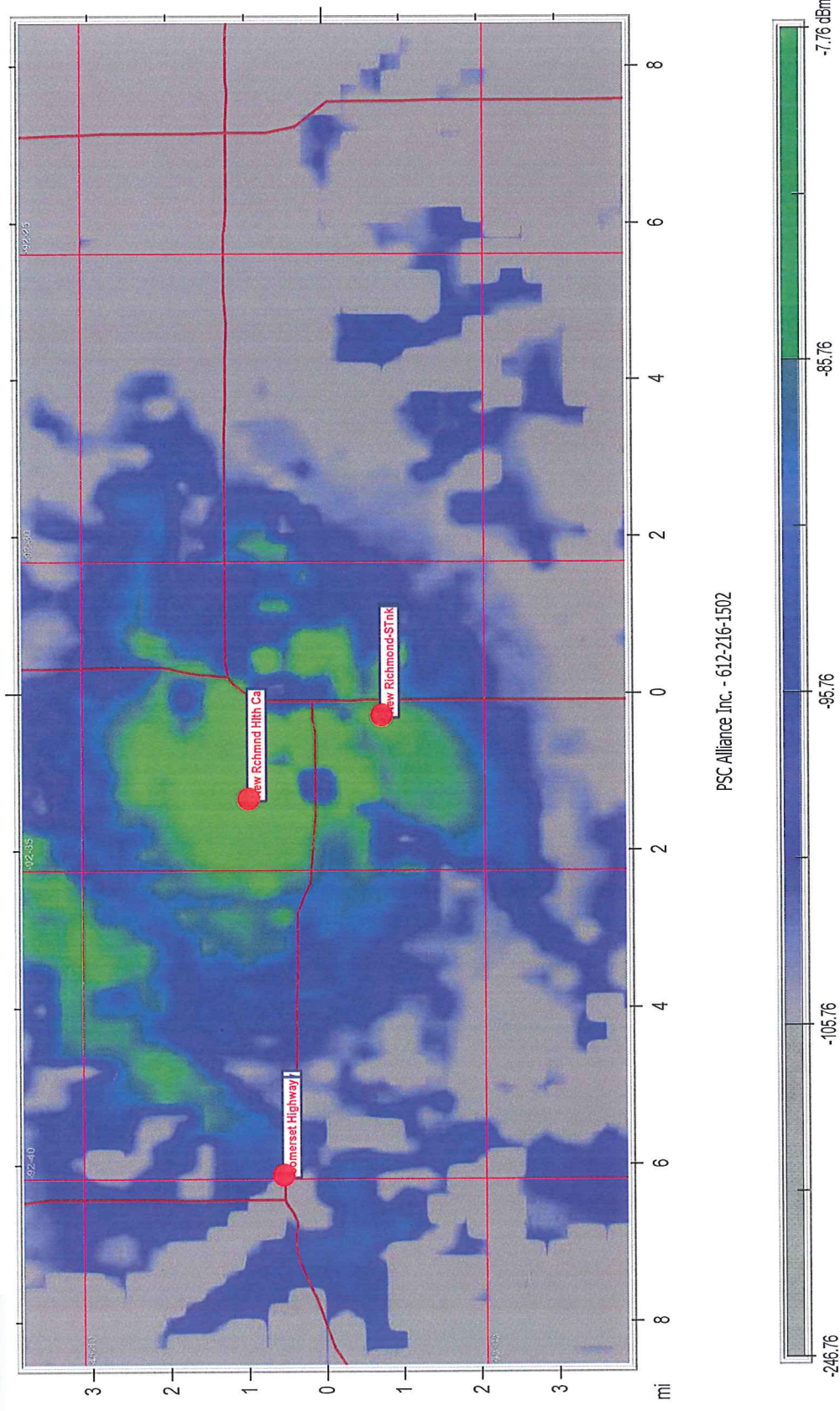
Port Antenna 3' AGL - Aug, 2015 - ZONING ATTACHMENT



PSC Alliance Inc. - 612-216-1502

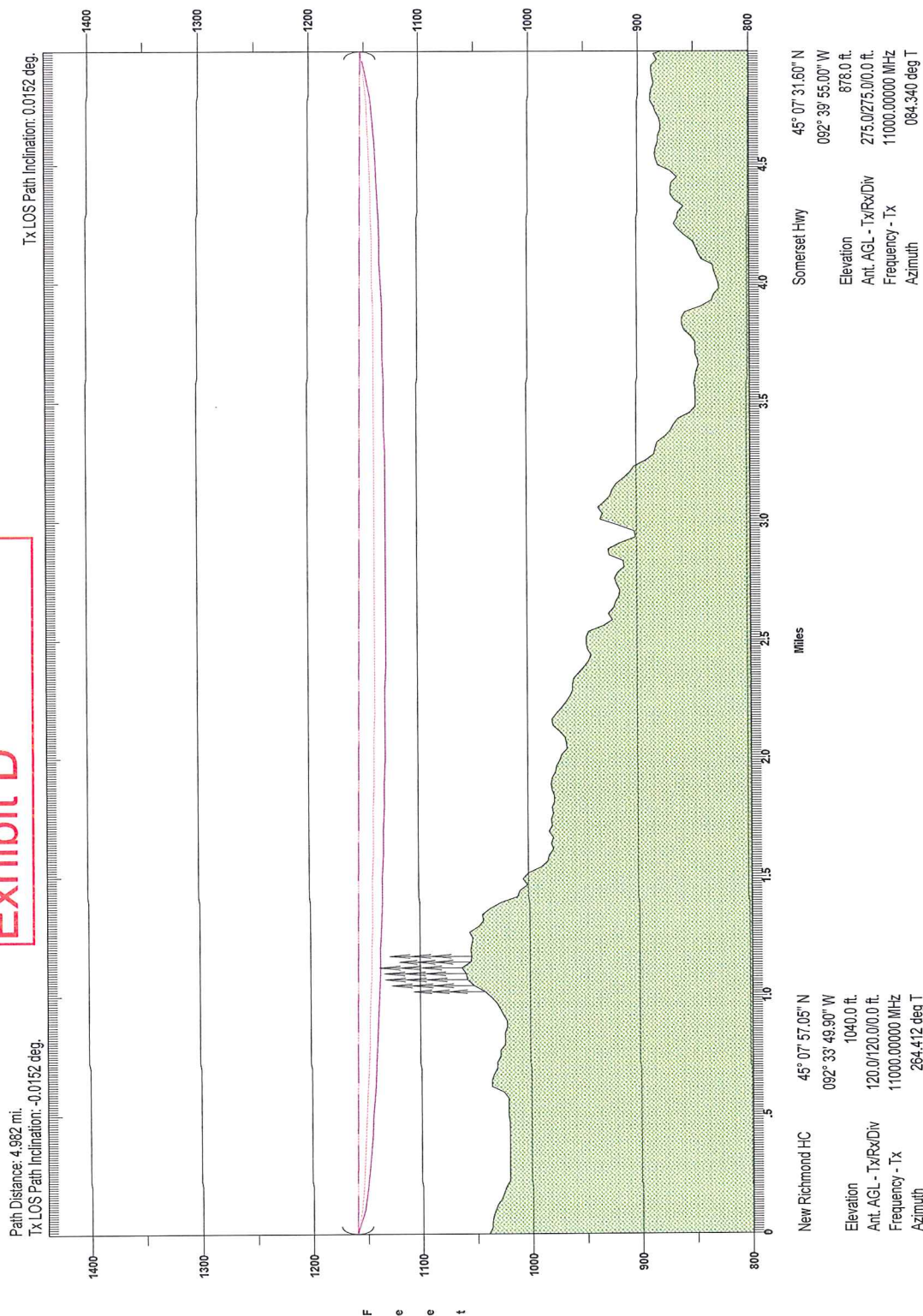
Exhibit C

Port Antenna 3' AGL - Aug, 2015 - ZONING ATTACHMENT



St. Croix County Zoning Submission

Exhibit D



PSC Alliance Inc.
(612) 216-1502

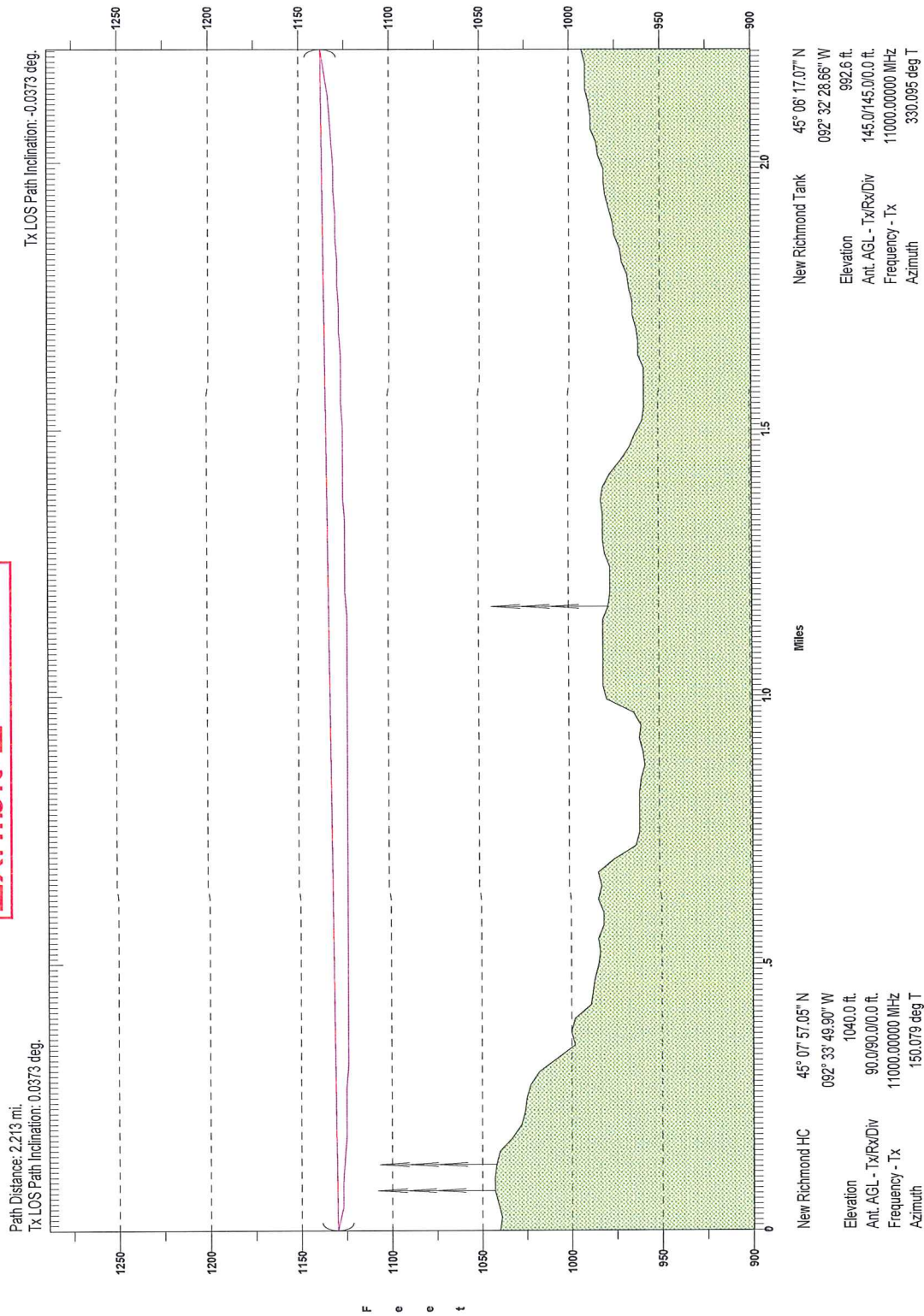
August 4, 2015

Profile
K = 4/3 K = 4/3, F = 0.6°F1 K = 4/3, F = 1

KEY:

St. Croix County Zoning Application

Exhibit E



PSC Alliance Inc.
(612) 216-1502

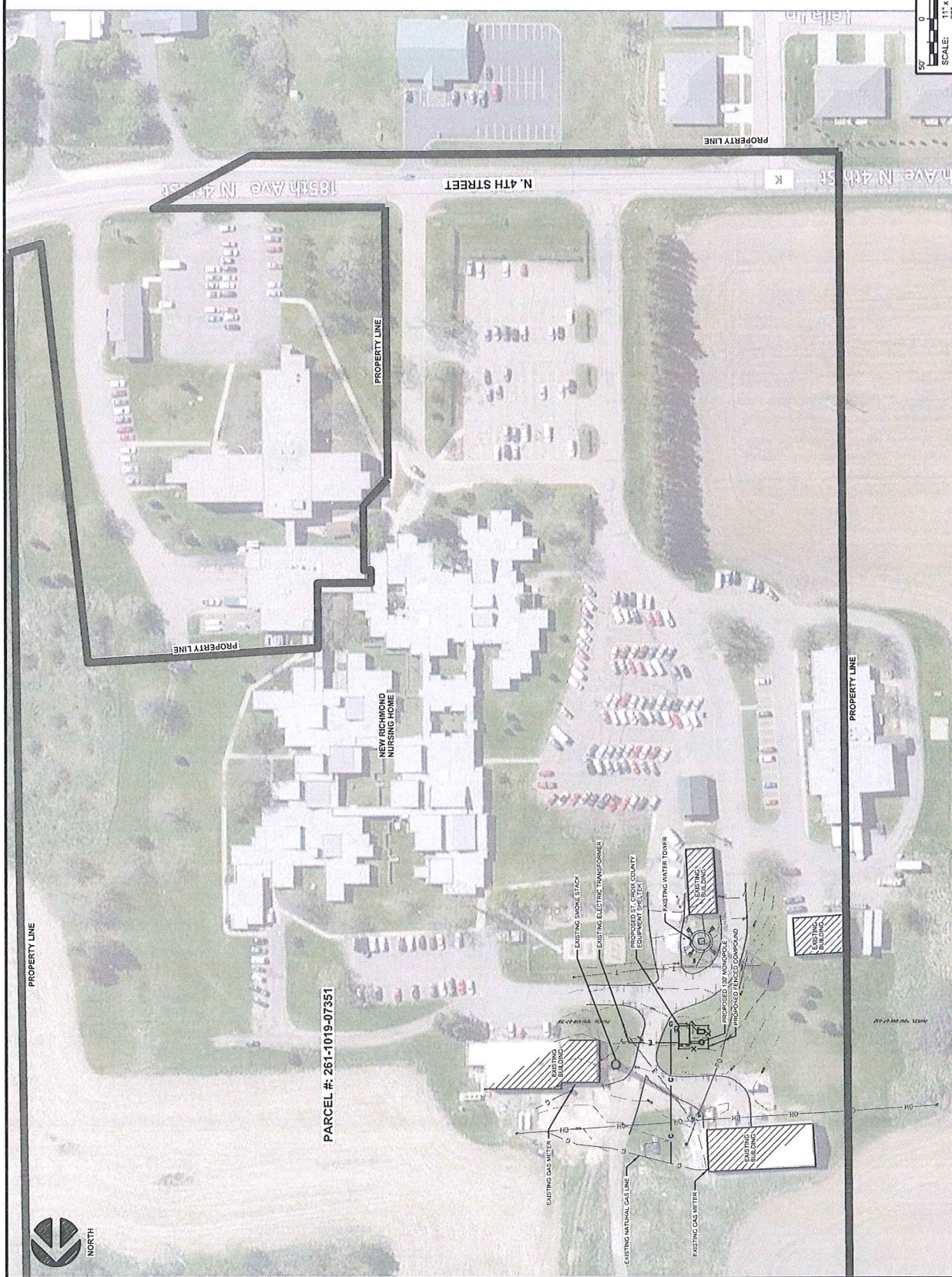
August 4, 2015

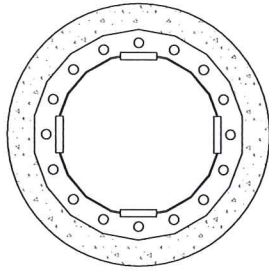
Profile
K = 4/3 K = 4/3, F = 0.6°F1 K = 4/3, F = 0.6°F1

KEY:



EDGE CONSULTING ENGINEERS, INC.



[illegible]

TOWER LOADING LEGEND



1. ALL DIMENSIONS ARE REFERENCE FROM THE TOP OF TOWER STEEL BASE PLATE.
2. TOWER & TOWER FOUNDATION - CONTRACTOR IS RESPONSIBLE FOR STRUCTURAL DESIGN OF BOTH ITEMS
3. ALL ANTENNAS, DISHES, FEEDLINES AND ASSOCIATED MOUNTS WILL BE PROVIDED AND INSTALLED BY TOWER CONTRACTOR.
4. AIR TERMINAL MOUNT/EXTENSION TO BE BOLTED DIRECTLY TO TOWER STEEL. AIR TERMINAL TO BE BONDED TO AIR TERMINAL MOUNT.
5. TOWER SHALL BE DESIGNED AND FABRICATED TO CONFORM TO TIA-EIA-222-REV 2, CLASS 3 III.

TOWER PROFILE (ELEVATION)

SHEET IDENTIFICATION

T-201

EDGE CONSULTING ENGINEERS, INC.

FILE NAME	7/20/2015
PROJECT NUMBER	12345
DATE	6/10/2015
PLOT DATE	A2D
CHECKED BY:	
DRAWN BY:	AMF, NED
GRAPHIC SCALE:	0, 10' = 1" /
SET TYPE:	2D
ISSUE DATE:	06/10/2015
DATE:	
REVISIONS:	DESCRIPTION
DATE:	
REVISION:	PRELIMINARY NOT FOR CONSTRUCTION

Edge Consulting Engineers, Inc.

NEW RICHMOND NURSING HOME TOWER
ST. CROIX COUNTY
NEW RICHMOND, WISCONSIN

TOWER LOADING / ELEVATION